



Trends in the medicalisation of childbirth in Flanders and the Netherlands

Wendy Christiaens, PhD (Senior research fellow)^{a,*}, Marianne J. Nieuwenhuijze, RM, MPH (Head and researcher)^b, Raymond de Vries, PhD (Professor)^{b,c,d}

^a Department of Sociology, Ghent University, Korte Meer 5, 9000 Ghent, Belgium

^b Department Midwifery Science, Academie Verloskunde Maastricht, Zuyd University, Netherlands

^c CAPHRI, School for Public Health and Primary Care, Maastricht University, Netherlands

^d Center for Bioethics and Social Sciences in Medicine, University of Michigan, USA

ARTICLE INFO

Article history:

Received 30 January 2012

Received in revised form

20 June 2012

Accepted 20 August 2012

Keywords:

Medicalisation of childbirth

Cross-national comparison

Obstetrical interventions

Social problems

ABSTRACT

Objective: in this paper we offer new insights about the medicalisation of childbirth by closely examining the trends in obstetric intervention rates in Flanders and the Netherlands and by considering the influence of contextual factors – including the organisation of the medical system, professional guidelines, and cultural ideas – on the way maternity care is delivered.

Design: a comparative study using perinatal statistics from the National Perinatal Databases of the Netherlands and Flanders and historical and qualitative data about the organisation and culture of maternity care in each country.

Setting and participants: in the Netherlands data are gathered from practices of the participating midwives, general practitioners and obstetricians. In Flanders the registration of data takes place in Flemish maternity units and independent midwifery practices.

Measurements and findings: in the Netherlands the home birth rate is still by far the highest in Europe and some interventions (e.g. caesarean section and epidural) are among the lowest. However, some perinatal statistics – such as in the use of epidural analgesia during labour – suggest an increasingly medical approach to birth in the Netherlands. Other trends in the Netherlands include an increasing use of inductions and augmentation in labour, and a decreasing number of births in primary care. The practice of home birth is being challenged by critical discussions in the popular media and ‘scientific’ debates among professionals. In Flanders, there have been some efforts to reduce medicalisation of childbirth, focussed on specific interventions such as induction and episiotomy.

Key conclusions: in recent years the obstetric intervention rates in Belgium and the Netherlands are slowly converging.

Implications for practice: because the lives of women, midwives, and obstetricians (among others) are significantly affected by patterns of medicalisation and de-medicalisation, it is important that we understand the drivers of the medicalising process.

© 2012 Elsevier Ltd. All rights reserved.

Background

The medicalisation of childbirth has had both desirable and undesirable consequences. The development of medical procedures to respond to pathological problems that arise in pregnancy and birth has had salutary effects for sick babies and mothers: the use of these same procedures when mother and baby are healthy increases costs and creates unnecessary risks to health. In this paper we examine trends in obstetrical interventions in Flanders and the Netherlands – two regions of the world that share many

structural and cultural characteristics and yet have markedly different approaches to the medicalisation of pregnancy and birth. We use this contrast to explore the social and cultural drivers of medicalisation, a necessary first step for those who wish to reduce unnecessary medicalisation of birth.

The organisation of maternity care in Flanders and the Netherlands

In many ways Flanders (the Flemish speaking part of Belgium) and the Netherlands are quite similar: they share a border, speak (more or less) the same language, and have comparable political systems. It is somewhat surprising then that there is great variation in the way the Flemish and Dutch maternity care systems are organised. In Flanders the risks of childbirth are emphasised and a medical model of birth is the norm. In the

* Corresponding author.

E-mail addresses: wendy.christiaens@ugent.be,
Wendy.Christiaens@kce.fgov.be (W. Christiaens).

Netherlands childbirth has long been defined as a physiological process that can occur safely under the care of a midwife at home or in a hospital (Wiegers et al., 1998; De Jonge et al., 2009). These different approaches to childbirth are reflected in the organisation and use of maternity care services. In the Netherlands, for example, women expecting a physiological birth are directed into midwife-led care with minimal use of interventions, resulting in a home birth rate of more than 20% (PRN, 2008; CBS, 2008) and midwife-led hospital birth rate of 11.4% (PRN, 2008). The option of a midwife-led hospital birth provides women with the possibility of having a birth in the hospital supervised by their midwife with a short stay after the baby is born. In case of difficulties during pregnancy and labour – either at home or in the hospital – women are referred to specialist care. The relatively high proportion of home births and the emphasis on normality are associated with low rates of obstetric interventions. In contrast, maternity care in Flanders is hierarchically organised and highly standardised. Medical intervention rates are high (in comparison to the Dutch). There is no formal boundary between primary and secondary care. Unlike women in the Netherlands, Belgian women do not need a preauthorisation to gain access to specialist care. In consequence the majority of Belgian women go straight to an obstetrician for antenatal care. Most Belgian women consider a hospital birth attended by their own obstetrician to be the best and safest way to give birth (Gilleir, 2007). This attitude is reflected in 97.9% of childbearing women having their babies in hospital under the care of an obstetrician (SPE, 2007). Only a very small group of women opt for a home birth. The average Flemish couple is not aware of the existence of independent midwifery practices or the possibility of having a midwife provide pre- and postnatal care. In addition, midwife-led hospital births, in the Dutch sense, are theoretically non-existent with hospital staff allowing them to accompany women during labour in hospital, but it is still the obstetrician who does the delivery and who is ultimately responsible in Flanders. In practice there are a few independent midwives who have an agreement with hospital staff allowing them to accompany women during labour in hospital.

Flanders is like most modern countries in the degree to which childbirth has been medicalised: the majority of the population agrees that secondary or even tertiary care is the best choice for women in labour and very few women and men question the need to medicalise childbirth. This is not the case in the Netherlands. After decades of quiet acceptance, midwifery care and home birth have become agenda items for the Dutch ministry of health and the parliament (Klink, 2008; Klink, 2010) and are heavily debated in the media (NRC Next—3 November 2010; NRC Handelsblad—3 November 2010; Trouw—4 November 2010; Vrij Nederland—20 November 2010; NRC Handelsblad—27 November 2011).

Medicalisation of childbirth

The concept of medicalisation is by now familiar to most who provide health care. Defined as 'a process by which non-medical problems become defined and treated as medical problems, usually in terms of illnesses or disorder' (Conrad, 1992), the idea has made us aware that other motivations to use health care exist in addition to, or 'on top' of, the primary aim for cure. In the case of birth, for example, both patients and doctors may use the induction of labour as a solution to the 'inconvenience' posed by birth (labour does not fit neatly into personal schedules or hospital routines). In fact, pregnancy and childbirth are textbook cases of medicalisation. They are, as such, healthy and normal physiological phenomena; but today, under influence of biomedical ideology emphasising safety, they are defined as essentially

risky events, with the lurking potential for pathology (Oakley and Houd, 1990). Indeed, many obstetric specialists now insist that childbirth can be called 'normal' only in retrospect (Lumley, 1993). Several authors from diverse academic disciplines (Oakley, 1983, 1992; Martin, 2001; Johanson et al., 2002) have criticised the extent of, and the manner in which, medical professionals control the birth process.

Research into birth experiences suggests that the use of medical technology erodes women's control over the birth process resulting in their alienation from this important moment in life (Davis-Floyd, 1994; Martin, 2001; Porter et al., 2007). In spite of these findings, however, research into women's preferences reveals that many feel comfortable with medical control of pregnancy and birth and are satisfied with medical interventions and hospital deliveries (Sargent and Stark, 1989; Lazarus, 1994; Green and Baston, 2007; Christiaens and Bracke, 2009). Indeed, many women desire and actively seek medical control over the unpredictable process of birth. For example, De Vries et al. (2009) found that the preference expressed by some otherwise healthy women for a surgical delivery was shaped by larger cultural themes related to pain, risk, and safety.

Methods

In order to more completely describe the varied levels of medicalisation in the Netherlands and Flanders, we use data from the national perinatal databases of the Netherlands (PRN, Perinatale Registratie Nederland) and Flanders (SPE, Studiecentrum voor Perinatale Epidemiologie). In the Netherlands the registration of data takes place in the practices of the participating midwives and general practitioners (LVR1), and obstetricians (LVR2). A form or an automated system is used for registration. The data recorded are, for the most part, similar for primary and secondary care, although system does include data specific to the tasks performed by midwives and by obstetricians. The data collected covers 96% of all births (PRN, 2011).¹ In Flanders the registration takes place in Flemish maternity units and independent midwifery practices. In 2009, all 67 maternity units in Flanders participated, and almost all Flemish home births (N=665) were registered by participating independent midwives.

In addition to the trends in obstetrical interventions, we also characterise the childbirth cultures of the Netherlands and Flanders, using a combination of published literature, professional guidelines and media reports.

Findings

Overall trends in obstetrical interventions (1992–2009)

Within each country

Perinatal statistics from the Netherlands show a small but increasing trend towards more medical interventions in childbirth. Data from 2008 (PRN, 2011) show that in the past several years there has been a small but steady increase (one to two per cent yearly) in the use of epidural analgesia during labour. Other trends in the Netherlands include an increased use of inductions and augmentation in labour (28.8% in 2003 versus 35.0% in 2008), and a decreasing number of births in primary care (36.2% in 2000 versus 32.7% in 2008) (PRN, 2006, 2008, 2011).

¹ It is important to note the missing 4% are from uncomplicated births attended at home by midwives or general practitioners, a fact which introduces a slight bias in the database.

In Flanders maternity care remains highly standardised and medicalised. Nevertheless, around the turn of the 21st century a decline for some interventions began. For example, induction rates have decreased since 2000 (from 31.9 in 1999 to 24.2 in 2009) and episiotomies decreased from 68.2% in 2001 to 55.1% in 2009. Also the number of forceps and vacuum extractions have decreased, but it must be noted that this drop was associated with an increase in caesarean sections (resulting in a net decline in vaginal births without intervention of 0.6% between 2000 and 2009). The percentage of home births rate has remained steady at around 1 per cent. On the other hand, the use of epidurals in Flanders has been rising steadily: from 32% in 1991 to 66.5% in 2009.

Between country comparison

Not surprisingly, when we began our comparison of official perinatal statistics for Flanders and the Netherlands we found a host of incompatibilities between data sets (Declercq and Viisainen, 2001). Because of different ways of counting, it proved difficult to compare rates between jurisdictions. Our effort to compare rates was complicated by a problem with denominators: in the Dutch PRN data the denominator sometimes refers to all children born dead or alive after a pregnancy of at least 22 weeks and sometimes to all women giving birth after 22 weeks of pregnancy. This is, however, clearly stated in the tables. In the Flemish SPE data, however, the denominator is the total number of deliveries. A delivery is not specified in terms of length of pregnancy, but as the birth of one or more children with a birth weight of minimum 500 g. The 'denominator problem' reflects differences in how the counting is done, but we also encountered problems with the characteristics of who is counted. Researchers must pay attention to definitional differences – we describe some of these below – but they must also consider the legitimacy of comparing procedures and outcomes in two populations that may not be comparable. For example, those who want to argue that home birth is unsafe will often compare perinatal mortality statistics in Flanders and the Netherlands, noting lower rates in Flanders where there are fewer births at home (see, e.g., Van der Kooy et al., 2011). In addition to committing the ecological fallacy (without individual level data we cannot know if higher rates of perinatal mortality in the Netherlands originate in home or hospital births), this comparison ignores important differences in socio-demographic characteristics in these two countries, like mother's age at first birth (28.3 for Flanders and 29.4 for the Netherlands, SPE 2010, CBS 2010) or rates of smoking during pregnancy. Within these limitations we explore variations in rates of home birth, epidurals, episiotomies, and inductions and we offer a brief explanation of factors that play a role in their prevalence in each region.

Home birth (1994–2008). Data on the number and percentage of home births in the Netherlands were found on the website of the Centraal Bureau voor de Statistiek (CBS). In the period between 1994 and 2010 the percentage of home births declined steadily from 34.1% to 23.4% (Table 1). In Flanders, statistics on home births are available from 2000 (SPE). Over the years 2000–2009 the percentage of home births remained quite stable around one per cent.

There are both structural and cultural reasons for this large difference (De Vries, 2004). The easy availability of home birth in the Netherlands – it is a routine part of the maternity care system there – compared to the less visible option of home birth in Flanders accounts for a large part of the more than 20 percentage point difference. But of course this structural difference between Flanders and the Netherlands must also be explained – why do the Dutch continue to make home birth a routine part of maternity care? Here we must look to cultural differences. In

Table 1

Place of birth in the Netherlands 1998–2010*† (in per cent).

Year	Home	Hospital
1994/1996	34.1	65.3
1998/2000	34.1	65.8
2001/2003	31.9	67.9
2004/2006	31.6	67.8
2005/2007	29.4	70.2
2006/2008	28.4	71.4
2007/2009	23.9	75.6
2008/2010	23.4	75.3

* Source: CBS (2012). <<http://statline.cbs.nl/StatWeb/publication/?VW=T&DM=SLNL&PA=37302&D1=0-2,23-44&D2=a&HD=120104-2121&HDR=T&STB=G1>> (assessed 4 January 2012).

† These numbers are estimates based on a national survey; the standard error for all years is 1.7, thus the 95% confidence level extends 3.332 above and below the reported value.

spite of a common language, Flemish and Dutch cultures are not alike: the Dutch have distinctive ideas about home (as the centre of family life), the roles of women (with low levels of participation in paid labour by women with children under 18), heroism (an aversion to playing the hero, especially with regard to medical interventions) and thriftiness (not simply with money, but also with perceived value of medications and medical interventions), all of which incline toward supporting birth at home. In the Netherlands, more mothers are working (<http://www.cbs.nl/nl-nl/menu/themas/arbeid-sociale-zekerheid/cijfers/extra/werkende-moeders.htm>), the use of prescription and non-prescription medications is increasing (Swinkels, 2011), and Netherlands are becoming more used to an interventionist approach in medicine, with an increase in ambulatory surgery from 238 to 430 per 10,000 citizens between 1995 and 2009 (<http://www.cbs.nl/nl-nl/menu/themas/gezondheid-welzijn/publicaties/artikelen/archief/2010/2010-3065-wm.htm>).

Epidural rates. Epidural rates in the Netherlands are available only for the period for 2003 to until 2008. In 2008, the Dutch and the Flemish were separated by 56 percentage points with a 67.4% epidural rate in Flanders and a rate of 11.3% in the Netherlands (Table 2). Interestingly, this observed difference in strategies for the management of labour cannot be explained by differences in the clinical guidelines of both countries.

In Flanders the clinical guidelines (Mambourg et al., 2010) recommend that the choices of a pregnant woman regarding pain relief should be respected. In addition, the guidelines state that women should be informed about the consequences of epidural analgesia (e.g. more frequent monitoring, limited movement). Finally, the guidelines recommend that caregivers always honour a woman's request for epidural analgesia during labour, regardless of the stage of cervical dilatation.

In the Netherlands a guideline regarding pharmaceutical pain relief during delivery was formulated in 2008 (NVA and NVOG, 2008). The Dutch guidelines are not unlike those in Flanders, but they go into more detail. Every woman in labour should, on her request, have access to an adequate form of pain relief. As in the Flemish guidelines, it is recommended that women be informed about consequences of analgesia, but the list of consequences in the Netherlands is more detailed and extensive: a longer hospital stay, a higher likelihood of oxytocin use and instrumental delivery, hypotension, locomotive block, and urine retention. Dutch caregivers are also encouraged to honour the request of a woman for epidural analgesia regardless of the stage of cervical dilatation. The effect of the Dutch guidelines cannot yet be determined because no national data on epidurals is available for 2009 and 2010. However, the general feeling among midwives and

Table 2
Percentage of epidural analgesia in Flanders and the Netherlands (1991–2009)*.

Year	Flanders †			The Netherlands ‡		
	Primiparous women	Multiparous women	Total	Primiparous women	Multiparous women	Total
1991			30.8			
1992			33.7			
1993			39.0			
1994			42.4			
1995			46.8			
1996			50.1			
1997	62.0	41.4	53.3			
1998	65.4	44.1	56.5			
1999	68.3	47.4	59.7			
2000	68.3	47.9	60.0			
2001	68.7	49.3	58.0			
2002	69.2	49.7	58.5			
2003	69.7	50.7	59.3	7.1	2.2	4.4
2004	66.9	48.4	57.1	8.2	2.4	5.0
2005	68.5	50.3	58.8	9.5	2.9	5.8
2006	70.7	51.6		11.5	3.4	6.9
2007	70.9	51.6		13.6	4.0	8.2
2008	71.5	52.6		16.0	5.0	9.8
2009	71.0	51.7				

* Instrumental births included.

† Source: SPE, Perinatale Activiteiten in Vlaanderen (Year reports 1991–2009).

‡ Source: PRN, Perinatale zorg in Nederland (Year reports 2003–2008).

obstetricians is that epidural rates are growing rapidly, a trend already evident before the new guidelines, with a 100% increase between 2003 and 2008.

Episiotomies. The rate of episiotomies in the Netherlands is available only for the years 2007 and 2008; for Flanders the rates are available from 2001. The percentages in Flanders are based on vaginal births only; those in the Netherlands are calculated with *all* births in the denominator. In order to make the two rates comparable, we recalculated the rates for the Netherlands with vaginal births as the denominator. Although there is a distinct difference in number of episiotomies in Flanders and the Netherlands – with nearly 30% more in the former – there is a clear declining trend in Flanders, especially among multiparous women (Table 3).

It is difficult to explain this difference. The official guideline for low-risk births in Flanders (Mambourg et al., 2010) advises against the routine use episiotomy in low-risk births, but recommends an episiotomy for instrumental births or suspected fetal distress. In the Netherlands there are no general guidelines advising on the use of episiotomies. There is a guideline on instrumental birth, which states that an episiotomy should be considered, especially in forceps births (as compared to vacuum extractions) (NVOG, 2005). Textbooks used for training medical and midwifery students recommend a limited use of episiotomies, especially in physiological births (Prins et al., 2009).

It is possible that the higher number of epidurals in Flanders contributes to the higher percentage of episiotomies: epidurals are associated with a longer second stage of labour, which in turn, is linked to the use of more episiotomies and more instrumental births (Newman et al., 2001).

We note that international guidelines – from the World Health Organisation (Liljestrand, 2003) and the Cochrane systematic review (Carroli and Mignini, 2009) – recommend restricted use of episiotomies.

Induction rates. Varied methods of measuring rates of induction illustrate how differing definitions result in misleading inter-

Table 3
Percentage of episiotomies in Flanders and the Netherlands (2001–2009).

Year	Flanders in vaginal births *			The Netherlands in vaginal births †		
	Primiparous women	Multiparous women	Total	Primiparous women	Multiparous women	Total
2001	82.20	56.30	68.20			
2002	81.30	51.80	65.40			
2003	79.60	49.10	63.00			
2004	79.20	47.60	62.40			
2005	78.20	47.40	61.10			
2006	78.10	43.10	59.40			
2007	76.50	41.80	57.80	47.00	14.90	29.00
2008	76.00	41.10	57.00	47.80	15.00	29.20
2009	74.80	41.10	55.10			

* Source: SPE, Perinatale activiteiten in Vlaanderen (Jaarverslagen 2000–2009)

† Source: Calculated based on PRN (2010, 2011). Jaarboek perinatale zorg 2007, 2008.

national comparisons. The official statistics for inductions in both countries reveal a distinct and interesting pattern: induction rates were quite stable during the 1990s – in the Netherlands around 17%, in Flanders around 30% – and from 2003 we find an *increasing* rate for the Netherlands and a *decreasing* rate in Flanders. But there is a problem here. The Dutch statistics include both induction and augmentation of labour, whereas Flemish statistics are exclusively for induction. We do have figures for inductions for one year in the Netherlands (2008): in that year the rate for induction at the start of labour was 15.5% (PRN, 2011). Thus, with these data we cannot make a clean comparison across jurisdictions; but we can look at changes within each jurisdiction. Inductions in Flanders have decreased (from 30.0% in 2003 to 25.3% in 2008); in the Netherlands there has been an increase in use of oxytocin during birth – either for induction or augmentation – from 23.1% in 2003, to 29.5% in 2008 (PRN, 2006, 2011).

Why these changes? In 2004, Prof. Dr. M. Temmerman, an influential Flemish gynaecologist, launched a debate about elective induction in the Flemish media. She argued for the introduction of an informed consent to be signed by mothers who want an induction for other than medical reasons, a strategy that reduced the induction rate in the University Hospital of Ghent from 33% to 26% (Mortier et al., 2006). An informed consent policy was integrated in the guidelines for good clinical practice in low risk births, published in 2010 (Mambourg et al., 2010). In addition, the guidelines state that an elective induction at term is not recommended between 37 and 41 weeks of pregnancy; after 41 weeks of pregnancy it is acceptable to induce labour.

It is unclear why the rates of inductions and augmentations have increased in the Netherlands. It may be the result of the active campaign, launched in 2002, to promote the 'Preventive Support of Labour' (Reuwer and Bruinse, 2002). On the basis of a manual for midwives and gynaecologists, the campaign has encouraged the adoption of strict rules for the progression of the first stage of labour (i.e., one centimetre dilation per hour from the onset of labour), a strategy that encourages augmentation for women who do not meet this standard.

What can we conclude from this international comparison? Birth remains a medicalised event in Flanders, and the Netherlands continues to be an exception in the Western world with its high rate of home birth and relatively low rates of interventions in birth. But in the last several years it appears that the medicalisation of birth, nearly complete in most modern countries, is now also influencing the experiences of Dutch women. What is driving this turn toward more medicalised birth? The lives of women, midwives, and obstetricians (among others) are significantly

affected by patterns of medicalisation and de-medicalisation, making it important to better understand the medicalising (and de-medicalising) process. Absent this understanding we have limited freedom to change features of the health-care system that are at the worst harmful, and at the least, unfriendly, to women and their families. In the following pages we use the Dutch–Flemish comparison to further explore the social and cultural aspects of the medicalising of birth.

Dutch and Flemish childbirth cultures

Birth as a medical event is accepted as the authoritative version of reality by the majority of Flemish people, but not necessarily by the majority of Dutch people. In Flanders, as in most other Western industrialised countries, medicalised pregnancy and childbirth have a normative status. Flemish women who desire a home birth, consciously or unconsciously, are challenging the norm (Gilleir, 2007). This is not true in the Netherlands. For a variety of reasons – related to the organisation of the health system and the cultural attitudes briefly described above – home birth is a routine part of maternity care. In recent years, however the taken-for-granted nature of home birth in the Netherlands has been challenged. Changes in the health-care system, increased exposure to medicalised birth via television programmes, growth in the number of working mothers, and efforts on the part of obstetricians in the Netherlands to show home birth to be dangerous, have created questions about the wisdom of birth at home in the minds of the public and policy makers (De Vries and Buitendijk, 2012).

The profession of midwifery in the Netherlands and Flanders

The debate about the value of home birth in the Netherlands is kept alive by the presence of an independent profession of midwifery there. In most other countries those who support home birth and value non-medical approaches to childbirth are marginalised. In Flanders, midwives have lost their power to challenge medicalised birth. Until the 1950s, Flemish midwives were organised in independent practices, attended home births or worked independently in maternity wards (Gooris and Hingstman, 1985). The introduction of the mandatory sickness and invalidity insurance in 1944 altered the education of midwives, consolidated midwives' qualifications, and limited the power of their professional association, all of which resulted in the loss of Flemish midwives' independence. The insurance stimulated hospital deliveries by making them affordable and the training programme of midwives was changed to a specialty within nursing, which changed midwifery from a medical to a paramedical profession (Gooris and Hingstman, 1985).

In the Netherlands, midwives have been able to safeguard their position because of (1) the support of the state, (2) the strength of their professional association (Benoit et al., 2005) and (3) the support of some influential obstetricians (Gooris and Hingstman, 1985). For centuries the Dutch government has actively supported the professionalisation of medicine and midwifery (Marland, 1993), unlike the government of Flanders, which supported only the professionalisation of medicine. Furthermore, the Dutch government promoted the normality of childbirth by means of legislation and insurance measures that favoured midwives and home birth, a high quality independent training programme for midwives, and the extension of midwives' qualifications. The hierarchical organisation of the Dutch health-care system, where providers of primary care – general practitioners and midwives – serve as gatekeepers to access to specialty care also advantaged midwives by giving them the power to decide who, when, and to whom to refer clients. In the past decade,

however, coincident with the medicalising of birth, the Dutch government has taken a more distant position in regulating the organisation of health care. The government is encouraging a more market-oriented approach towards care and protective regulations like the one that instituted a preference for midwife-led care (the 'primaat') have disappeared (Van Veen, 2001).

In 2005, a professional profile for midwives was approved in the Netherlands and Flanders. In the Netherlands, the KNOV (Koninklijke Nederlandse Organisatie van Verloskundigen – the Royal Dutch Organization of Midwives) developed the professional profile of the midwife. In recent years, they moved towards a differentiation between a community-based midwife and a hospital-based midwife. However, both varieties of midwives are trained within the physiological paradigm of pregnancy and birth. The present vision of the KNOV (2011) again emphasises the importance of unity as one midwifery profession based on the physiological paradigm. This midwife must be able to work in an integrated model of maternity care, giving continuity of midwifery care to women either at home or when referred to the hospital for e.g. pain relief or augmentation. A major challenge is to keep a strong physiological, social approach in this model of care. In Belgium, the Federal Council of Midwives (Federale Raad voor Vroedvrouwen) took the initiative in updating the profile. Belgian midwives in primary and secondary care share the same profile, one that is strongly oriented towards a clinical setting.

The Dutch (Liefhebber et al., 2005) and the Belgian (Federale raad voor de vroedvrouwen, 2005) professional profiles emphasise the sense of responsibility and autonomy of midwives in line with the European Directives for Midwives, but the work settings of each affect the degree to which professional autonomy can be realised. In the Dutch profile, home is the preferred place of birth and the hospital is an alternative, whereas the Flemish profile turns the sequence around. The Dutch profile explicitly promotes normal birth, an emphasis that is notably absent from the Flemish text.

Childbirth as a social problem

(...). Few subjects can evoke as much insane opinion and inane acrimony as home birth. (...) Any new home birth study, whether it exposes the hazards or the merits of home birth, is guaranteed to fuel the fires of controversy, keeping both opponents and proponents nicely warm while shedding more heat than light on the subject. The last few years have seen renewed interest in starting the home birth fires, kindled by articles, commentaries, and editorials in several journals, and fanned by media and a public that, ever since Roman times, can be relied on to value bread and circuses more than common sense (Keirse, 2010, p.341).

Sociologists define a social problem as 'an alleged situation that is incompatible with the values of a significant number of people who agree that action is needed to alter the situation' (Rubington and Weinberg, 1995). Notice that the object of a social problem is 'an alleged situation.' If a certain situation is perceived and defined as a problem by a significant number of people, it is a social problem, even if there is no objective evidence of a 'real' problem. Thus, concern about childbirth in the Netherlands, including the debates occurring in national newspapers and in parliament, say nothing about the objective quality of care before, during, or after childbirth there. The existence of the debate, however, tells us something about how birth is perceived.

Viisainen (2001) claims that every society produces its own consensual opinion about birth. In the Western world this opinion is based on biomedical knowledge. However, as illustrated by the contrast of Flanders and the Netherlands, different ways of framing the situation may compete to be accepted as the authoritative version of reality (Hilgartner and Bosk, 1988; David-Floyd and Sargent, 1997).

An irony of the so-called 'risk society' is that scepticism about expert knowledge has increased (Beck, 1992). As traditional institutions have lost their hold over individual lives, people must shape their own biographies and be able to define their own priorities (Beck, 1994), but nevertheless, rational beings are assumed to reduce risks by following expert advice. Non-compliance is seen as irrational or risky behaviour (Zinn, 2008). Even before they are pregnant, women are exposed to a multiplicity of assumptions about risks, many hotly debated. However, little is known about how these discourses of risk impact on a woman's perception and experience of pregnancy (Mitchell, 2010). Pregnant women are perceived as responsible for their well-being and the well-being of their baby, which links the 'risks' she is prepared to take to cultural notions of good motherhood.

Slovic (1987) also makes this important observation:

Whereas psychometric research implies that risk debates are not merely about risk statistics, some sociological and anthropological research implies that some of these debates may not even be about risk. Risk concerns may provide a rationale for actions taken on other grounds or they may be a surrogate for other social or ideological concerns (p. 285).

This observation is especially relevant for the Dutch childbirth debate, because the debate cannot be separated from the tension between obstetricians and midwives as professions with their own competing paradigms (De Vries and Buitendijk, 2012). In other Western industrialised countries (e.g. Belgium), autonomous midwives attending home (and hospital) deliveries have almost disappeared and thus there is no practical basis for a clash between professions or challenges to the dominant view that birth is essentially risky (De Vries and Nieuwenhuijze, 2011). Lacking a counter-narrative to the 'birth is risky' view, the medicalisation of childbirth proceeds unimpeded.

Discussion and conclusion

Medicalisation of the birth process is not a new phenomenon. It is something that has taken (and continues to take) place in all western countries. Until recently, however, the Netherlands was known as the country that had resisted that trend. Today, the movement toward medicalised birth – present everywhere else in the modern world – appears to be affecting the wishes and demands of Dutch women (Pavlova et al., 2009; Van der Hulst et al., 2007) and the attitudes of Dutch caregivers (e.g. midwives in their assessment of normality, obstetricians in their readiness to intervene) (Amelink-Verburg et al., 2009). As we have illustrated, some perinatal statistics – such as in the use of epidural analgesia during labour – suggest an increasingly medical approach to birth in the Netherlands. Other trends in the Netherlands include an increasing use of inductions and augmentation in labour, and a decreasing number of births in primary care. In addition, the practice of home birth is being challenged by critical discussions in the popular media and 'scientific' debates among professionals.

Given the structural and organisational differences in the way maternity care is organised in Flanders and the Netherlands,

it is not surprising that over the last decades Flanders has higher obstetric intervention rates. However, in recent years the rates of some obstetric interventions in these jurisdictions have been converging. Other authors have noticed increased medicalisation in Dutch perinatal care. Particularly striking is a trend analysis showing an increase of referrals from primary to secondary care during pregnancy and labour from 36.9 in 1988 to 51.4% in 2004. The main reasons for referral were obstetrical history (particularly that of previous caesarean section) in parous women, and failure to progress and the desire for pain relief in nulliparous women, and signs of fetal distress in both groups (Amelink-Verburg et al., 2009). On the other hand, in Flanders, there have been some efforts to reduce medicalisation of childbirth, focussed on specific interventions, such as induction and episiotomy.

Our comparison of the organisation and delivery of maternity care in Flanders and the Netherlands offers insight into existing international variation in the degree of medicalisation of childbirth and the contextual factors associated with those variations. In the first generation of medicalisation theory, medicalisation was considered a top down movement initiated by a medical profession seeking to extend its control over more and more domains of daily life. The second generation of theorising medicalisation recognises that the process is also generated by a demand from the public for medical solutions (Christiaens and van Teijlingen, 2009). This also means that women do not necessarily experience a medical approach to childbirth as bad or traumatising (Green and Baston, 2007). A lot of women (especially in Flanders) desire a medicalised childbirth and ask for medical interventions and report they are satisfied with their birth (Christiaens and Bracke, 2009). To understand why the experiences of childbearing women diverge from traumatic in one extreme to empowering in the other extreme, future research needs to identify the determinants of the meanings women attach to medical solutions, taking into account how those meanings are created by culture.

The comparison of trends in the Netherlands and Flanders, located in their social, cultural, and political context, helps map the medicalisation of childbirth and offers insight into the diverse ways the medicalisation of childbirth proceeds. It is interesting and important to note that although the medicalisation of childbirth appears complete in many modern countries, there are small counter-movements in the direction of de-medicalisation and increased use of home birth (MacDorman and Declercq, 2011).

Midwives who wish to promote less medical and more natural birth can build on these counter movements and use them to sway public opinion. Our findings on the changes in use of induction and augmentation in Flanders suggest that such change is possible – use of informed consent resulted in a significant decline in inductions. But how can we change culture? The medicalisation of birth in the Netherlands is associated with cultural shifts in attitudes about medicine and family life. Are there measures for preserving cultural ideas that are friendly to physiological birth with minimal intervention? Structural change can initiate cultural change and, as we have seen, cultural ideas are the foundations of medical systems. In Flanders, the introduction of the Dutch version of midwife-led hospital births would not only decrease medical interventions there, it may also reassure women about their ability to birth without medical interventions. In the Netherlands, those in favour of home birth must work to preserve the cultural ideas that support the system that offers easy access to the option of birthing at home.

Of course those who wish to medicalise birth can also use the same tactics: as we saw in the Netherlands, a campaign for 'preventive support of labour' seems to have driven up the use

of inductions and augmentations, which will in turn alter attitudes in favour of medicalised birth. As providers of maternity care, we must be alert to the ways our practices shape cultural ideas about birth, which in turn influence the kind of care we provide.

Conflict of interest

The authors declare no conflict of interest.

Acknowledgements

This research was funded by and contributes to the EU COST action ISO907: 'Childbirth Cultures, Concerns, and Consequences': Creating a dynamic EU framework for optimal maternity care.

References

- Amelink-Verburg, M.P., Rijnders, M.E.B., Buitendijk, S.E., 2009. A trend analysis in referrals during pregnancy and labour in Dutch midwifery care 1988–2004. *BJOG—An International Journal of Obstetrics and Gynaecology* 116, 923–932.
- Beck, U., 1992. *Risk Society, Towards a New Modernity*. Sage, London.
- Beck, U., 1994. The reinvention of politics: towards a theory of reflexive modernization. In: Beck, U., Giddens, A., Lash, S. (Eds.), *Reflexive Modernization, Politics, Tradition and Aesthetics in the Modern Social Order*. Polity Press, Cambridge.
- Benoit, C., Wrede, S., Bourgeault, I., Sandall, J., De Vries, R., van Teijlingen, E.R., 2005. Understanding the social organisation of maternity care systems: midwifery as a touchstone. *Sociology of Health & Illness* 27, 722–737.
- Carroll, G., Mignini, L., 2009. Episiotomy for vaginal birth. *Cochrane Database of Systematic Reviews*, 1, <http://dx.doi.org/10.1002/14651858.CD000081.pub2>.
- CBS, 2008. Plaats van bevalling. <<http://statline.cbs.nl/StatWeb/publication/?VW=T&DM=SLNL&PA=37302&D1=0-1.45-48&D2=0.5-1&HD=110413-1418&HDR=G1&STB=T>> (accessed June 2012).
- Christiaens, W., Bracke, P., 2009. Place of birth and satisfaction with childbirth in Belgium and the Netherlands. *Midwifery* 25, e11–e19.
- Christiaens, W., van Teijlingen, E., 2009. Four meanings of medicalisation: childbirth as a case study. *Salute e Società* 8, 123–141.
- Conrad, P., 1992. Medicalization and social-control. *Annual Review of Sociology* 18, 209–232.
- David-Floyd, R.E., Sargent, S.F., 1997. *Childbirth and Authoritative Knowledge. Cross-Cultural Perspectives*. University of California Press, London.
- Davis-Floyd, R.E., 1994. The Technocratic Bo-y—American childbirth as cultural expression. *Social Science & Medicine* 38, 1125–1140.
- Declercq, E., Viisainen, K., 2001. The politics of numbers: the promise and frustration of cross-national analysis. In: De Vries, R., Benoit, C., van Teijlingen, E., Wrede, S. (Eds.), *Birth by Design. Pregnancy, Maternity Care, and Midwifery in North America and Europe*. Routledge, New York.
- De Jonge, A., Van der Goes, B.Y., Ravelli, A.C.J., Amelink-Verburg, M.P., Mol, B.W., Nijhuis, J.G., Bennebroek Gravenhorst, J., Buitendijk, S.E., 2009. Home birth: as safe as in hospital? *BJOG* 116, 1685–1686.
- De Vries, R., Buitendijk, S., 2012. Science, safety, and the place of birth: lessons from the Netherlands. *European Obstetrics & Gynaecology*, 7 (Suppl. 1), 13–17.
- De Vries, R., Nieuwenhuijze, M., 2011. Commotie over babysterfte (Commotion about infant mortality). *Medisch Contact* 66, 1126–1130.
- De Vries, R., Kane Low, L., Bogdan-Lovis, E., 2009. Choosing surgical birth: desire and the nature of bioethical advice. In: Lindemann, H., Verkerk, M., Urban Walker, M. (Eds.), *Naturalized Bioethics*. Cambridge University Press, Cambridge, pp. 42–64.
- De Vries, R., 2004. *A Pleasing Birth: Midwives and Maternity Care in the Netherlands*. Temple University Press, Philadelphia.
- Federale raad voor de vroedvrouwen, 2005. Beroepsprofiel van de Belgische vroedvrouw.
- Gilleir, C., 2007. Thuis bevallen in Vlaanderen: een kwestie van reflexiviteit (Home birth in Flanders: a matter of reflexivity). *Tijdschrift voor Sociologie* 28, 25–51.
- Gooris, F.M.C., Hingstman, L., 1985. De rol en positie van vroedvrouwen in België en Nederland (The role and position of midwives in Belgium and the Netherlands). *Gezondheid en samenleving* 6, 276–285.
- Green, J.M., Baston, H.A., 2007. Have women become more willing to accept obstetric interventions and does this relate to mode of birth? Data from a prospective study. *Birth* 34, 6–13.
- Hilgartner, S., Bosk, C.L., 1988. The rise and fall of social problems: a public arenas model. *American Journal of Sociology* 94, 53–78.
- Johanson, R., Newburn, M., Macfarlane, A., 2002. Has the medicalisation of childbirth gone too far? *British Medical Journal* 324, 892–895.
- Keirse, M.J.N.C., 2010. Home birth: gone away, gone astray, and here to stay. *Birth* 37, 314–346.
- Klink, A., 2008. Keten zorg zwangerschap en geboorte (Continuous care pregnancy and childbirth). Brief aan de 2e kamer. Den Haag: Ministry of Health.
- Klink, A., 2010. Antwoorden op de vragen van Kamerlid Arib (PvdA) over de noodzaak om de verloskundige zorg radicaal te veranderen. (Answers to questions of MP Arib (Labour Party) about the necessity to radically change the maternity care system). Den Haag, Ministry of Health.
- KNOV, 2011. Nieuwe balans in de verloskunde (A new balance in midwifery) KNOV: Utrecht. <http://www.knov.nl/docs/uploads/110525_Visie_KNOV_def_2.pdf> (accessed June 2012).
- Lazarus, E.S., 1994. What do women want—issues of choice, control, and class in pregnancy and childbirth. *Medical Anthropology Quarterly* 8, 25–46.
- Liljestrand, J., 2003. Episiotomy for vaginal birth: RHL practical aspects (last revised 20 October 2003). The WHO Reproductive Health Library. World Health Organization, Geneva.
- Liefhebber, S., van Dam, C., Waelput, A., 2005. Beroepsprofiel verloskundige. Koninklijke Nederlandse Organisatie van Verloskundigen (KNOV), Bilthoven.
- Lumley, L.H., 1993. Illness versus natural process: competing paradigms in Great Britain and the Netherlands. In: Abraham-Van der Mark, E. (Ed.), *Successful Home Birth and Midwifery: The Dutch Model*. Bergin & Garvey, Westport.
- MacDorman, M.F., Declercq, E., 2011. United States home births increase 20 percent from 2004 to 2008. *Birth* 38, 185–190.
- Mambourg, F., Gailly, J., Wei-Hong, Z., 2010. Richtlijn voor goede klinische praktijk bij laag risico bevallingen. Good Clinical Practice (GCP). Federaal Kenniscentrum voor de Gezondheidszorg (KCE), Brussel. KCE Reports 139A. D/2010/10.273/62.
- Marland, H., 1993. *The Art of Midwifery. Early Modern Midwives in Europe*. Routledge, London.
- Martin, E., 2001. *The Woman in the Body. A Cultural Analysis of Reproduction*. Beacon Press, Boston.
- Mitchell, M., 2010. Risk, pregnancy and complementary and alternative medicine. *Complementary Therapies in Clinical Practice* 16, 109–113.
- Mortier, A., Verstraeten, H., Temmerman, M., 2006. Minder geïnduceerde bevallingen dankzij een informed consent: een interventiestudie in het UZ Gent. *Tijdschrift voor Vroedvrouwen* 12, 10–14.
- Newman, M.G., Lindsay, M.K., Graves, W., 2001. The effect of epidural analgesia on rates of episiotomy use and episiotomy extension in an inner-city hospital. *Journal of Maternal–Fetal Medicine* 10, 97–101.
- NVA, NVOG, 2008. Richtlijn medicamenteuze pijnbehandeling tijdens de bevalling (Guideline pharmaceutical pain relief during delivery). <http://www.knov.nl/docs/uploads/richtlijn_pijnbehandeling_bij_de_partus_def_091208.pdf>.
- NVOG, 2005. Vaginale kunstverlossing (Assisted vaginal delivery). <http://nvog-documenten.nl/index.php?pagina=richtlijn/pagina.php&fselectTG_62=75&fselectSub=62&fselectParent=75> (accessed June 2012).
- Oakley, A., Houd, S., 1990. *Helpers in Childbirth: Midwifery Today*. Hemisphere Publishing Corporation, London.
- Oakley, A., 1983. Social-consequences of obstetric technology—the importance of measuring soft outcomes. *Birth—Issues in Perinatal Care* 10, 99–108.
- Oakley, A., 1992. *Social Support and Motherhood. The Natural History of a research Project*. Blackwell, Oxford.
- Pavlova, M., Hendrix, M., Nouwens, E., Nijhuis, J., van Merode, G., 2009. The choice of obstetric care by low-risk pregnant women in the Netherlands: implications for policy and management. *Health Policy* 93, 27–34.
- Perinatale Registratie Nederland (PRN), 2006, 2008, 2011. *Perinatale zorg in Nederland 2003, 2005, 2008 (Perinatal care in the Netherlands 2003, 2005, 2011)*. PRN, Bilthoven.
- Porter, M., van Teijlingen, E., Chi Ying, Yip L., Bhattacharya, S., 2007. Satisfaction with caesarean section: a qualitative analysis of open-ended questions in a large postal survey. *Birth* 34, 148–154.
- Prins, M., van Roosmalen, J., Scherjon, S., Smit, Y., 2009. De normale baring (Physiological birth). In: *Praktische verloskunde*. Bohn, Stafleu, van Loghum, Houten.
- Reuwer, P.J.H.M., Bruinse, J.W., 2002. Preventive support of labour, een uitdaging voor verloskundigen, gynaecologen en beleidsmakers (Preventive support of labour, a challenge to midwives, obstetricians and policymakers). Van Zuiden Communications BV, Alphen aan de Rijn.
- Rubington, E., Weinberg, M.S., 1995. *The Study of Social Problems. Seven Perspectives*, 5th edn. Oxford University Press, Oxford.
- Sargent, C., Stark, N., 1989. Childbirth education and childbirth models: parental perspectives on control, anesthesia, and technological intervention in the birth process. *Medical Anthropology Quarterly* 3, 36–51.
- Slovic, P., 1987. Perception of risk. *Science* 236, 280–285.
- Swinkels, H., 2011. Trendcijfers Gezondheids- enquête 1981–2009, Gebruik geneeskundige voorzieningen, gezondheidsindicatoren en leefstijl (Trends health questionnaire 1981–2009, Use medical facilities, health indicators and lifestyle). Centraal Bureau voor de Statistiek, Den Haag.
- Studiecentrum voor Perinatale Epidemiologie (SPE), 2007. Jaarrapport perinatale activiteiten in Vlaanderen 2007 (Year report perinatal activities in Flanders 2007). SPE, Brussels.

- Van der Hulst, L.A.M., van Teijlingen, E.R., Bonsel, G.J., Eskes, M., Birnie, E., Bleker, O.P., 2007. Dutch women's decision-making in pregnancy and labour as seen through the eyes of their midwives. *Midwifery* 23, 279–286.
- Van der Kooy, J., Poeran, J., de Graaf, J.P., Birnie, E., Denktas, S., Steegers, A.P., Bonsel, G.J., 2011. Planned home compared with planned hospital births in the Netherlands. Intrapartum and early neonatal death in low-risk pregnancies. *Obstetrics and Gynaecology* 118, 1037–1046.
- Van Veen, A., 2001. Het einde van het primaat (The end of “het primaat”). *Tijdschrift voor Verloskundigen* 26, 804–806.
- Viisainen, K., 2001. Negotiating control and meaning: home birth as a self-constructed choice in Finland. *Social Science and Medicine* 52, 1109–1121.
- Wiegers, T.A., van der Zee, J., Kerssens, J.J., Keirse, M.J.N.C., 1998. Home birth or short-stay hospital birth in a low risk population in The Netherlands. *Social Science & Medicine* 46, 1505–1511.
- Zinn, J.O., 2008. Heading into the unknown everyday strategies for managing risk and uncertainty. *Health Risk and Society* 10, 439–450.